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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/740,265	12/17/2003	Patrick N. Matthews	T-6265	1917
34014	7590	08/08/2007	EXAMINER	
CHEVRON CORPORATION			MCAVOY, ELLEN M	
P.O. BOX 6006			ART UNIT	
SAN RAMON, CA 94583-0806			PAPER NUMBER	
			1764	
			MAIL DATE	
			DELIVERY MODE	
			08/08/2007	
			PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/740,265

Applicant(s)

MATTHEWS ET AL.

Examiner

Ellen M. McAvoy

Art Unit

1764

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 May 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-26 are still rejected under 35 U.S.C. 103(a) as being unpatentable over Colle et al (5,491,269), Colle (6,222,083) and Peiffer et al (6,194,622), considered separately.

Applicants' arguments filed 23 May 2007 have been fully considered but they are not persuasive. As previously set forth, Colle et al (5,491,269) [Colle '269] disclose a method for inhibiting the formation of clathrate hydrates in a pipe used to convey petroleum oil or natural gas. For example, flow restrictions arising from partial or complete blockages in a fluid stream can arise as clathrate hydrates adhere to and accumulate along the inside wall of the pipe used to convey the fluid. The method comprises treating the petroleum oil or natural gas fluid inside the pipe with an inhibitor comprising a substantially water soluble polymer produced from a cyclic imino ether. The water soluble polymer may be introduced into the petroleum fluid stream in a carrier solvent which includes water, brine, alcohol, sea water and mixtures thereof. See column 2, line 23 to column 3, line 19. Colle '269 teaches that as the inhibitor solution or mixture is substantially dissolved in the aqueous phase or dispersed in the fluid stream it reduces the rate that clathrate hydrates are formed, and thereby reducing the tendency for a flow restriction to occur. Although the specific amounts of water in some of the dependent claims is not set forth in the prior art, Colle '269 teaches that any convenient concentration of inhibitor in

the carrier solvent can be used. Applicants' method claims differ by not adding the polymer component to the solvent. However, the claim language "consists essentially of" limits the scope of the claims to the specified materials "and those that do not materially affect the basic and novel characteristic(s)" of the claimed invention. *In re Herz*, 537 F.2d 549, 551-52, 190 USPQ 461, 463 (CCPA 1976). The examiner maintains the position that the addition of the smallest amount in Colle '269, about 0.01 % by weight, of the gas hydrate inhibitors to the water component which optionally may contain salt or brine, does not affect the basic and novel characteristics of the claimed invention. Although the specific system for preventing the formation of hydrate blockage in a flow line is not set forth in the prior art, Colle '269 teaches that the inhibitor mixture is introduced into the aqueous phase of the petroleum fluid using mechanical equipment which is apparent to those skilled in the art. See column 3, lines 35-42.

Colle '083 discloses a method for inhibiting the formation of gas hydrates in a petroleum fluid having hydrate-forming constituents. For example, flow restrictions arising from partial or complete blockages in a fluid stream can arise as gas hydrates adhere to and accumulate along the inside wall of the pipe used to convey the fluid. The method comprises treating the petroleum fluid inside the pipe with an inhibitor comprising substantially water soluble homopolymers and copolymers of N-acyldehydroalanine derivatives. The water soluble polymers may be introduced into the petroleum fluid stream in a carrier solvent which includes water, brine, alcohol, sea water and mixtures thereof. See column 3, line 62 to column 4, line 63. Colle '083 teaches that as the inhibitor solution or mixture is substantially dissolved in the

aqueous phase or dispersed in the fluid stream it reduces the rate that gas hydrates are formed, and thereby reducing the tendency for a flow restriction to occur. Although the specific amounts of water in some of the dependent claims is not set forth in the prior art, Colle '083 teaches that any convenient concentration of inhibitor in the carrier solvent can be used. Applicants' method claims differ by not adding the polymer component to the solvent. However, as set forth above, the claim language "consists essentially of" limits the scope of the claims to the specified materials "and those that do not materially affect the basic and novel characteristic(s)" of the claimed invention. *In re Herz*, 537 F.2d 549, 551-52, 190 USPQ 461, 463 (CCPA 1976). The examiner maintains the position that the addition of the smallest amount in Colle '083, about 0.01 % by weight, of the gas hydrate inhibitors to the water component which optionally may contain salt or brine, does not affect the basic and novel characteristics of the claimed invention. Although the specific system for preventing the formation of hydrate blockage in a flow line is not set forth in the prior art, Colle '083 teaches that the inhibitor mixture is introduced into the aqueous phase of the petroleum fluid using mechanical equipment which is apparent to those skilled in the art. See column 4, line 64 to column 5, line 3.

Peiffer et al ["Peiffer"] also disclose a method for inhibiting the formation of gas hydrates in a petroleum fluid having hydrate-forming constituents. The method comprises treating the petroleum fluid inside the pipe with an inhibitor comprising substantially water soluble homopolymers and copolymers of surfactant monomers. The water soluble polymers may be introduced into the petroleum fluid stream in a carrier solvent which includes water, brine, alcohol, sea water and mixtures thereof. See column 3, line 62 to column 4, line 62. Peiffer

teaches that as the inhibitor solution or mixture is substantially dissolved in the aqueous phase or dispersed in the fluid stream it reduces the rate that gas hydrates are formed, and thereby reducing the tendency for a flow restriction to occur. Although the specific amounts of water in some of the dependent claims is not set forth in the prior art, Peiffer teaches that any convenient concentration of inhibitor in the carrier solvent can be used. Applicants' method claims differ by not adding the polymer component to the solvent. However, as set forth above, the claim language "consists essentially of" limits the scope of the claims to the specified materials "and those that do not materially affect the basic and novel characteristic(s)" of the claimed invention. *In re Herz*, 537 F.2d 549, 551-52, 190 USPQ 461, 463 (CCPA 1976). The examiner maintains the position that the addition of the smallest amount in Peiffer, about 0.01 % by weight, of the gas hydrate inhibitors to the water component which optionally may contain salt or brine, does not affect the basic and novel characteristics of the claimed invention. Although the specific system for preventing the formation of hydrate blockage in a flow line is not set forth in the prior art, Peiffer teaches that the inhibitor mixture is introduced into the aqueous phase of the petroleum fluid using mechanical equipment which is apparent to those skilled in the art. See column 4, line 63 to column 5, line 2.

Applicants argue that:

"...the inclusion of hydrate inhibitors, for example, hydrate inhibitors that can be mixed at ***low concentrations*** of about 0.01%, according to Colle '269, Colle '083, and Peiffer, ***does materially*** affect the basic and novel characteristic of the claimed invention, as the claimed invention avoids not only the need to incur the cost of providing hydrate inhibitors, but also the handling and disposal of hydrate inhibitors."

This is not deemed to be persuasive because the claimed inventive method of inhibiting hydrate formation blockage in a flow line transporting a hydrocarbon containing fluid is not affected by the addition of the hydrate inhibitors of the prior art.

Applicants argue that:

“Further, even if each of the cited references ‘teaches that any convenient concentration of inhibitor in the carrier solvent can be used’, as asserted by the Examiner, the cited references do not anticipate claims 2-4, which each recite a minimum percentage of the water cut enhanced hydrocarbon containing fluid. The water cut of the present claims would correspond to the carrier solvent of the cited references, rather than the inhibitor of the cited references, which is excluded by the present claims.”

This is not deemed to be persuasive because it is not exactly clear what is meant in claims 2-4 wherein sufficient water is added such that the water cut of the water cut enhanced hydrocarbon containing fluid is at least 50% or 75% or 85%. When the water is initially added to the hydrocarbon fluid, the water cut is essentially 100% before it mixes with the hydrocarbon fluid and the water cut % decreases as the water mixes in with the hydrocarbon fluid. The examiner is of the position that this claimed limitation does not differ from the prior art references which also added water (containing hydrate inhibitor) to the hydrocarbon fluid.

**THIS ACTION IS MADE FINAL.** Applicants are reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ellen M. McAvoy whose telephone number is (571) 272-1451. The examiner can normally be reached on M-F (7:30-5:00) with alt. Fridays off.

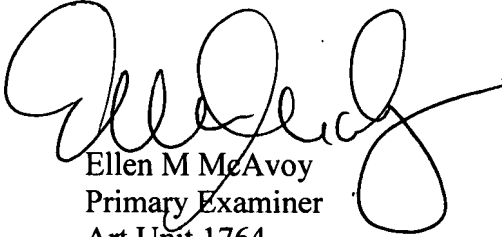
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would



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like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Ellen M McAvoy  
Primary Examiner  
Art Unit 1764

EMcAvoy  
August 1, 2007